
KYRUS

Pragmatic Approach to Breaking Mobile Apps

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- Who are Kyrus? - http://kyr.us
- Washington DC, New York, Chicago, San Antonio
- ‘The Cyber Security Skunkworks’
- Vulnerability Research
- Reverse Engineering
- Forensics
- Custom Software Development

Introduction

- Talk is focussed on application security not OS security (See Dino's talk)
  - What Apps do wrong despite the OS
  - Bugs vs Flaws
- The principles are general
- Rationale is aimed at Enterprises & SMBs

Aims

- Rapidly validate a mobile App against a specific threat model
- End up with a quantifiable set of risks that can be mitigated, or knowingly accepted
- You won't stop the mobile device tide, just try understand your risks

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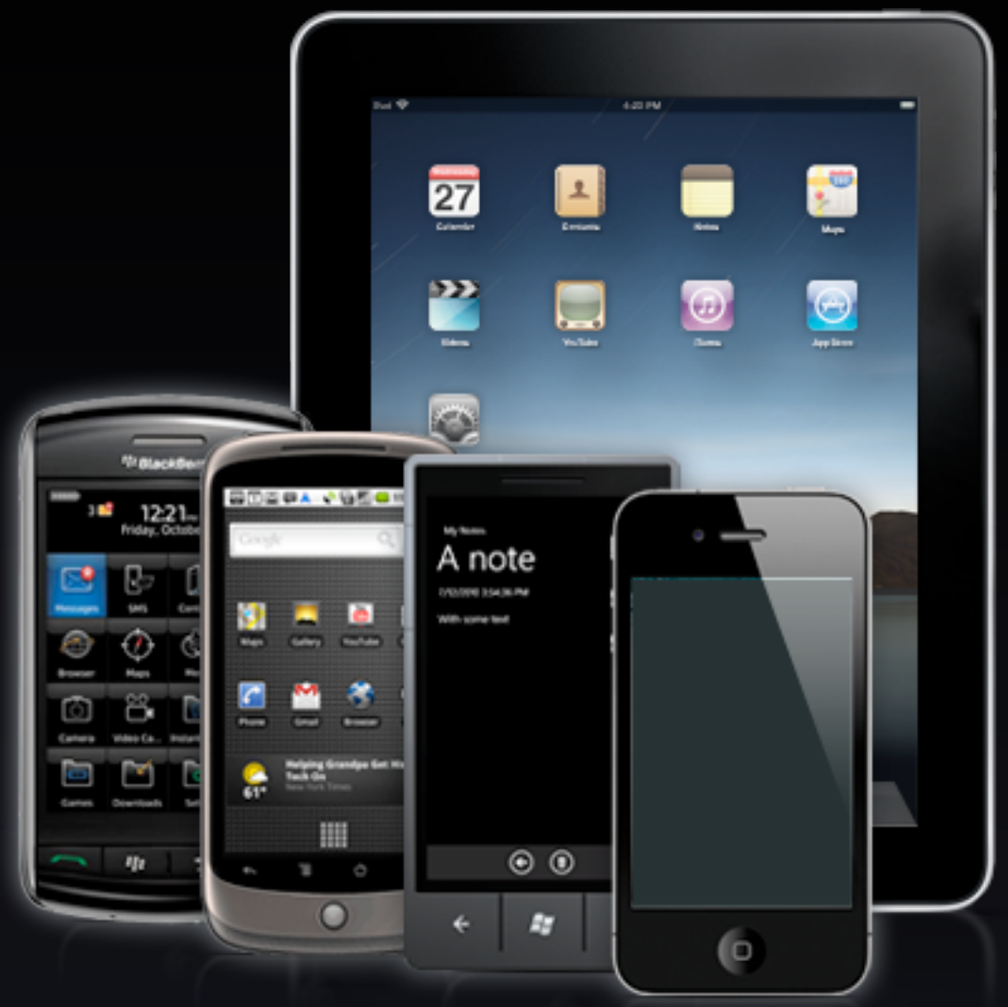
Avoid

- Blindly believing vendor security claims
- Your company ending up on the front page of Morgunblaðið

The Changing Landscape

Mobile devices are at the centre of many current tech trends



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The Cloud

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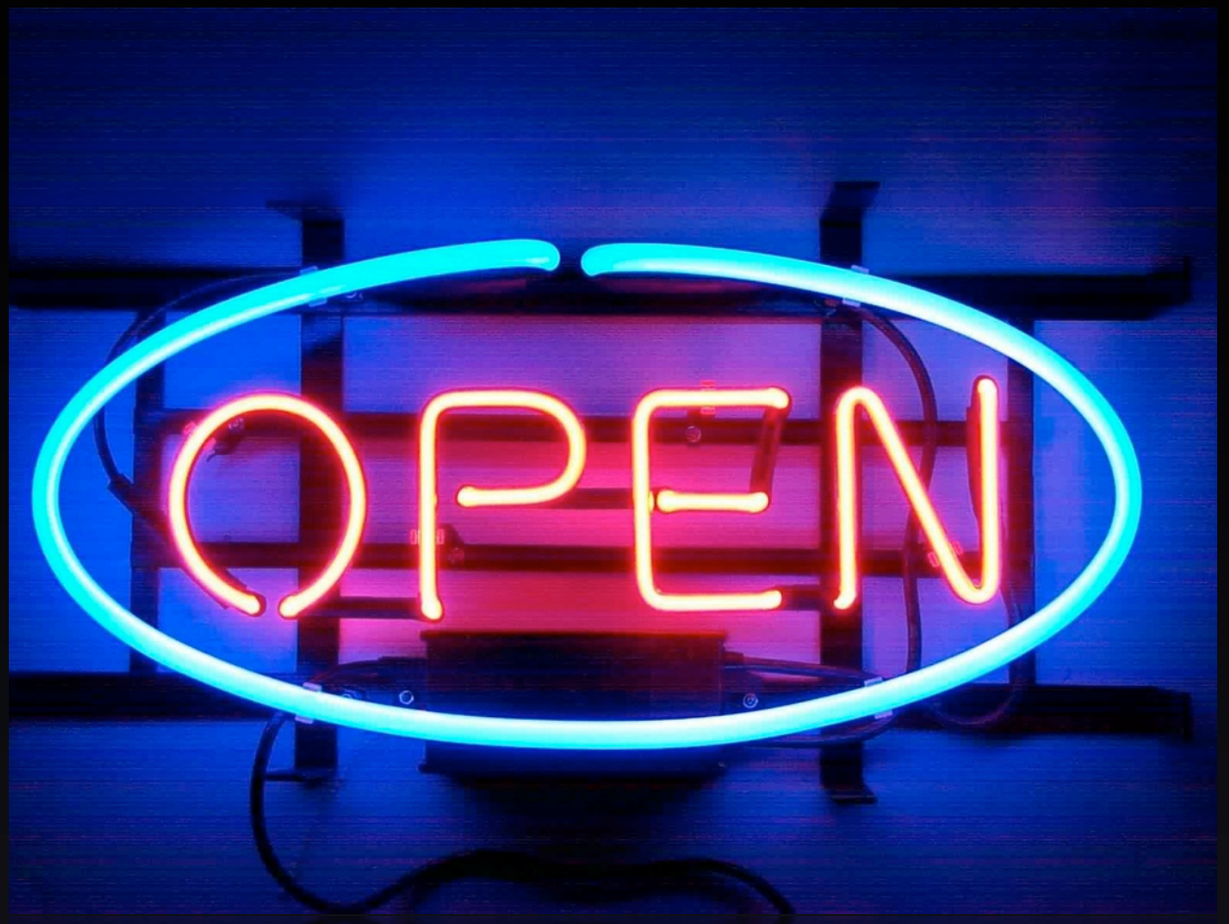

Open APIs

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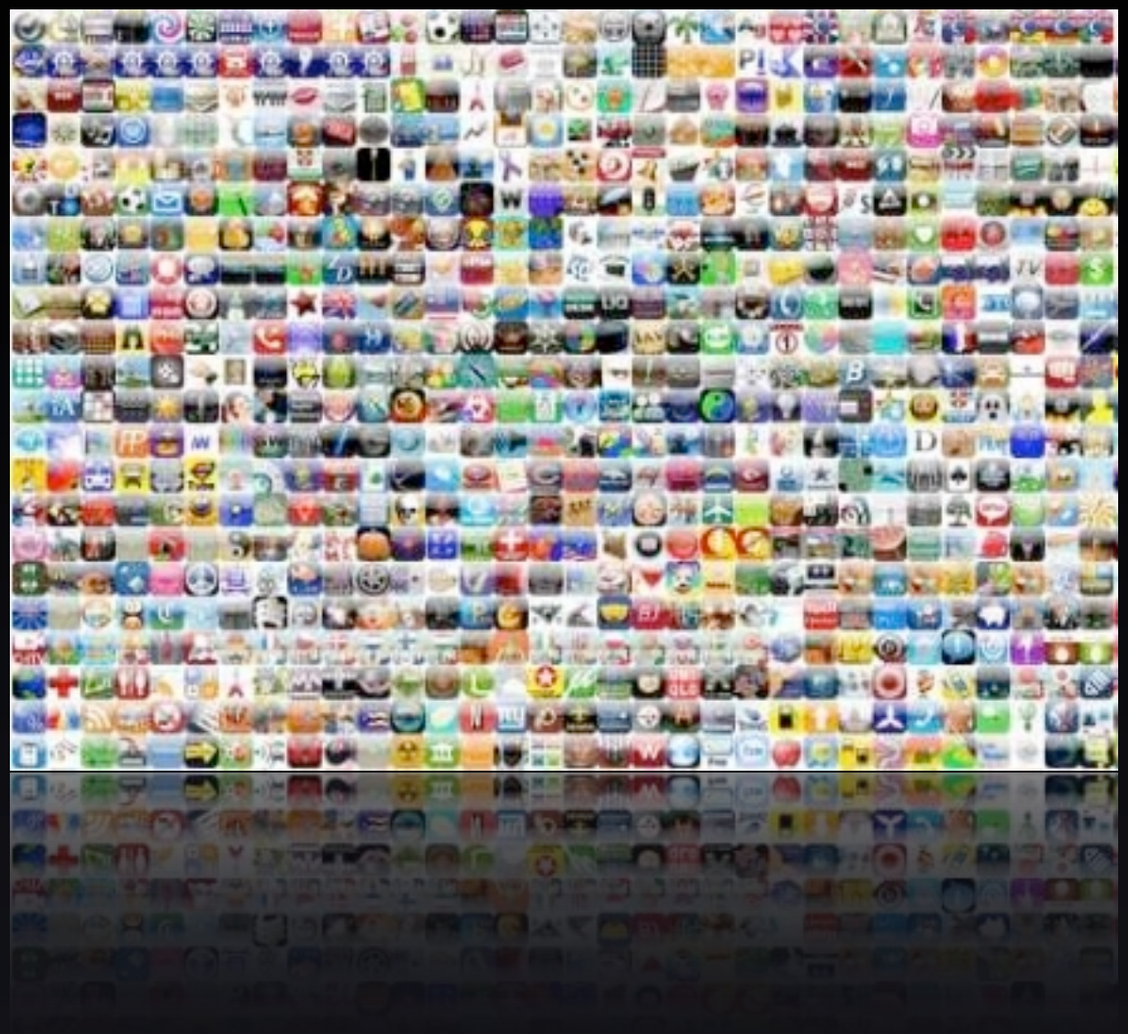

App Stores

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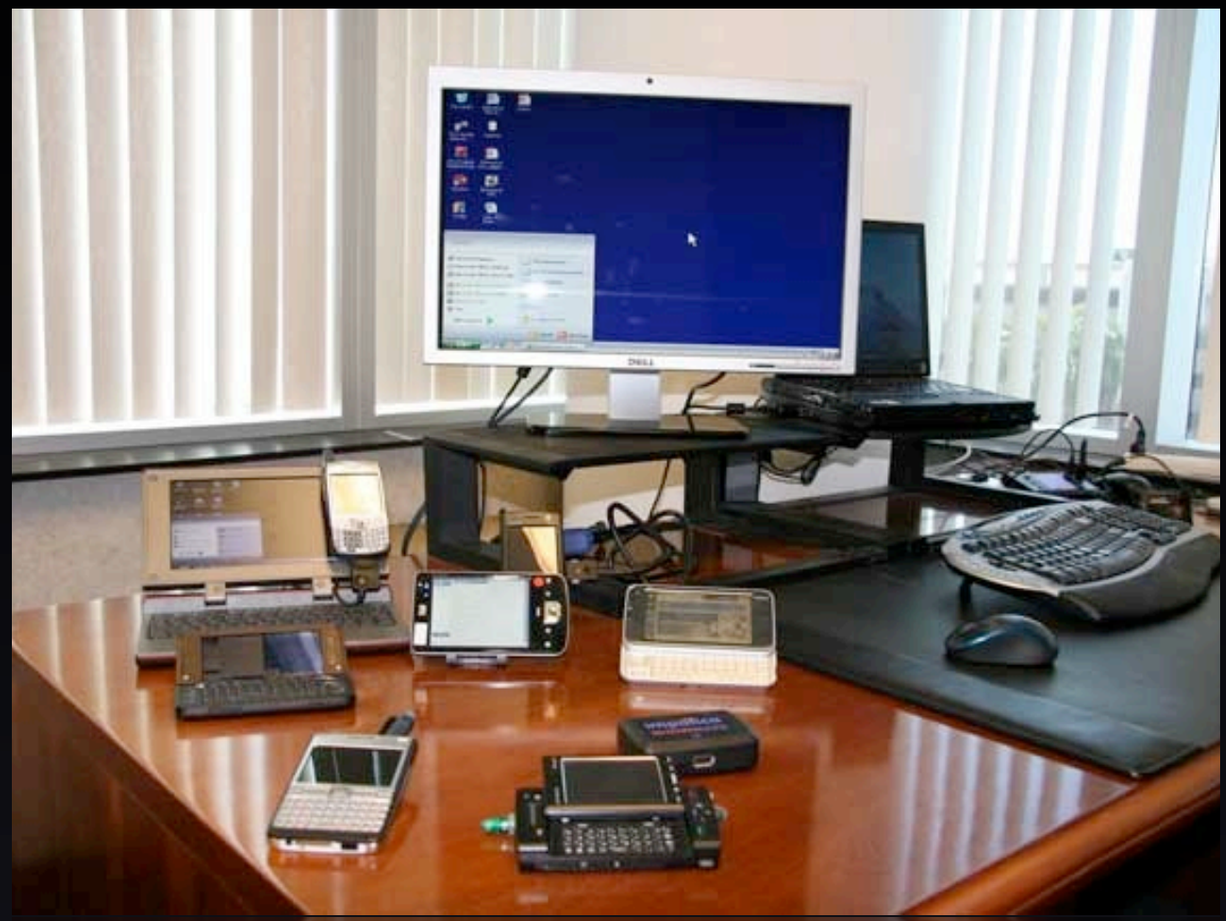

BYOD - Bring Your Own Device

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Mobile Landscape

- While these trends don't create a *requirement* for mobile device usage....
- ....they increase the *pressure* for them to be used everywhere

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Mobile Landscape

- This pressure is coming from senior business people
  - They handle the most sensitive data
  - They see security as getting in the way
  - They wanted it yesterday .....

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...so JUST APPROVE IT ALREADY!

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The Real World™

- You will be asked to approve increasing numbers of mobile apps in 2012
- You won't have as long as you want to assess them

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The Real World™

- You will be assessing Apps from small & start up vendors
- They won't have security as a core skill or priority, time to market wins all

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The Real World™

- You will need to prioritise high risk, low hanging fruit
- You won't have time to reverse out every function

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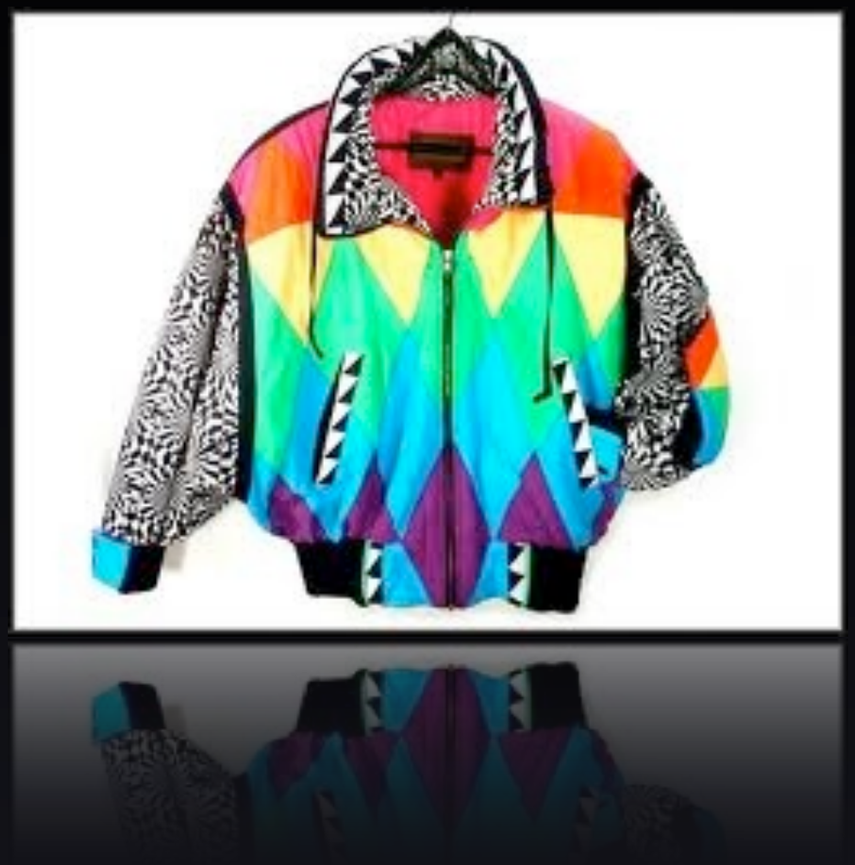
The Real World™

- You will see the same mistakes again, and again and again .....



You will feel like you doing security back in the 90's again!

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Pragmatic Assessment

- Rapidly assess an App with focus on the areas of highest risk for the given usage
- Take a threat centric view of the App
- Produce a set of well understood risks that you can mitigate or accept

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Total Cost of 0wnership

- Think in terms of 'TC0'
- How much effort will it cost an attacker to take advantage of the latest mobile must-have App ?

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Primary Risks for this App

Sensitive Data Loss	Loss / Theft of device Loss amplification
Device as Facilitator	Does possession of the device provide advantage for backend attack?
Loss Detection	Do you know if the data is compromised?

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Threat Centric View

- How is the user authenticated
  - Enrolment, forgotten password..
- How does the device operate offline
- How is data at rest secured
- How does it use the OS services

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Spurningar

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